Veterinary and Biomedical Sciences reconnects with valued alumni

Our goal with this newsletter is to reconnect with you, our valued alumni, and to kick off the new Veterinary and Biomedical Sciences Alumni Group. We hope to foster an ongoing conversation with you— to provide some information about our recent activities and then to hear back from you.

As you may know, in 2005 the Department’s name changed to Veterinary and Biomedical Sciences in order better to reflect the range of research, education, and outreach in which we engage.

Currently, we are one of the largest departments in the College of Agricultural Sciences with 34 nationally and internationally recognized outstanding faculty, 29 technical and administrative staff and 35 graduate students. Our department continues to attract many outstanding post-doctoral fellows from national and international institutions.

Today we occupy laboratory and office space in the Henning Building and adjoining Agricultural Sciences and Industries Building, in the new state of the art Life Sciences Building completed in 2004, and in the Animal Diagnostic Laboratory and the Centralized Biological Laboratory.

Our success in cutting edge research led us to establish the Center for Molecular Immunology and Infectious Disease and the Center for Molecular Toxicology and Carcinogenesis. Our faculty are affiliated with the intercollegiate Huck Institutes of the Life Sciences, the Penn State Institutes for Energy and the Environment, the Center for Nutrigenomics, the Center for Infectious Disease Dynamics, and still other Centers of Excellence at Penn State.

Two newly established undergraduate programs, Toxicology and Immunology and Infectious Disease, have grown rapidly, while the Animal Bioscience major has continued to foster opportunities for students who are interested in veterinary school, medical school, graduate school and careers.

We want to celebrate your accomplishments in future issues. Reconnect with us at vbs-alumni.psu.edu

Accomplished alumnus Vivek Kapur returns as new Department Head

“Vivek has a distinguished record of accomplishment as a scholar and administrator,” says Robert Steele, dean of the College of Agricultural Sciences. “He has demonstrated excellence in research and teaching, and in communicating the relevance of his research,” Steele said. “We believe his knowledge and experience will enhance our existing strengths in veterinary diagnostics, environmental toxicology, and immunology and infectious disease.”

Kapur joined the faculty at the University of Minnesota in 1995 as an assistant professor in the Department of Veterinary Pathobiology and soon was appointed director of the Advanced Genetic Analysis Center. In 1999, he was promoted to associate professor, and in 2001, he helped to establish the university’s Biomedical Genomics Center and was named its co-director. He assumed sole responsibility for the center and achieved the rank of full professor in 2003.

Kapur is internationally recognized for his research in microbial genomics. His record includes more than 100 original published articles and six U.S. patents. He leads an international consortium studying Johne’s disease, an important infectious disease of cattle worldwide, and he is the recipient of several national and international awards for his research in microbial genomics.

“Our strengths in VBS are the high productivity of the faculty and our direct linkage to the real world,” Kapur says.

Dr. Vivek Kapur, who earned his PhD in Veterinary Science from the department in 1991, has returned to Penn State to serve as head of the Department of Veterinary and Biomedical Sciences.
Faculty introduce young students to biomedical careers

“I’ve always loved animals!” “Ever since I was little I knew I wanted to become a veterinarian!”

Everyone who advises pre-vet students hears these statements almost daily. So Dr. Nüket Acar decided to establish an outreach program for 8th, 9th, and 10th grade students with those interests. On Saturday November 10, twenty two middle and high school students attended the first annual “Exploring Careers in the Veterinary and Biomedical Sciences” event at the University Park campus.

The program kicked off with a discussion panel where Dr. Eva Wallner-Pendleton and Dr. Jennifer Nunnery talked about their paths to becoming veterinarians and how they balance career and family.

Current undergraduates Ashley Prasse (Toxicology), Matthew Gardner (Immunology and Infectious Disease), and Michael Timko (Animal Bioscience) described their paths to Penn State and into their majors for students and parents. They also elaborated on their future career plans and answered many questions from the audience.

Following the panel discussion, students chose from hands-on laboratory activities including “Examining X-rays” with Dr. Jake Werner, “What’s wrong with my pet?” with Dr. David Wolfgang, “Surgical suturing” with Dr. Jeffrey Dodds, “Blood types and diseases” with Dr. Jeanne Lumadue, and “DNA extraction and visualization” with Dr. Sandeep Prabhu.

Over lunch, Dr. James Endres Howell revealed the “secret of success” in the veterinary and biomedical fields: “Get as much math and science training as you can, as broad and as deep as you can, as early as you can.”

The Animal Quiz Bowl, organized by Dr. Kathy Heiderstadt, was also a big hit. Students learned a lot about animals while competing and having fun.

Dr. Acar was very pleased with the outcome. “I am still receiving many great comments from the student participants and their parents. I could not have done it without all the faculty and student volunteers who helped with the program! We plan to continue to host this event for years to come.”

Former Chair Channa Reddy transformed the Department

In a bittersweet banquet at the Penn Stater on September 29, 2006, faculty, staff, students, and alumni from across the decades gathered to bid farewell to Dr. C. Channa Reddy after seven years of visionary service as department head.

Reddy, who retired as Distinguished Professor of Veterinary and Biomedical Sciences, is known around the world for his scientific and administrative talents. He also retired from his post as Director of Penn State’s Huck Institutes of the Life Sciences.

As Emeritus Professor, Reddy will divide his time between his native India, where he is developing a variety of scientific, educational, and community projects, and State College, where he will continue to serve the Department and the University.

Speakers at the ceremony included current faculty and staff members, life-long friends, and students. Former students traveled from both coasts to share memories of Channa as their mentor.

Reddy spent virtually his entire career at Penn State, coming to the University as a postdoctoral fellow in the Department of Chemistry in 1975. He landed an assistant professorship in Veterinary Science in 1981 and was promoted to associate professor in 1985. In 1988, he was promoted to full professor and was named Distinguished Professor in 1991.

At the conclusion of the farewell banquet, Reddy—with characteristic humility—thanked faculty, staff, and students alike, “I was successful,” he told the crowd, “because of each of you.”

Reddy is recognized throughout the Penn State campus, and internationally, not only for his record of outstanding research but also for his vision and leadership. His dedication to excellence resulted in the new undergraduate majors in Toxicology and Immunology and Infectious Disease, as well as the hiring and promotion of a number outstanding faculty over the past seven years.

One of his recent contributions to the department was in changing the name of the department to “Veterinary and Biomedical Sciences” in order to better reflect the range of educational programs and research conducted by faculty members. “We expect the name change to serve us better to compete for external funding in animal health and diagnostics, toxicology, immunology, hematology, and carcinogenesis,” Reddy says.

Under his leadership, three new University research and educational “centers of excellence” emerged: the Center for Molecular Toxicology and Carcinogenesis (CMTC), the Center for Molecular Immunology and Infectious Disease (CMIID), and the E. coli Reference Center.

The department has expanded its activities for extension and outreach to the animal agriculture community through Veterinary Outreach, Field Investigation, and the Animal Diagnostics Laboratory. The latter is part of the Pennsylvania Animal Diagnostic Laboratory System.

Reddy and his wife Usharani have pledged $50,000 to establish the C. Channa and Usharani Reddy Trustee Matching Scholarship. First preference for the award will go to students majoring in Animal Bioscience.
Department adds two new faculty for undergraduate advising

The Department of Veterinary and Biomedical Sciences has added two new faculty members to oversee undergraduate education. Dr. Nüket Acar, a veterinarian and poultry scientist, coordinates advising for the long-successful Animal Bioscience major. Dr. James Endres Howell, a molecular biologist, is the Program Coordinator for the Department’s new programs in Toxicology and Immunology and Infectious Disease, and the faculty advisor to the Biomedical Sciences Club.

Both have been on the faculty nearly two years, and their duties include teaching, advising, and recruiting and retaining the best students in the majors—and maintaining connections with alumni. The newsletter you hold in your hands is a part of that effort.

Dr. Acar (pronounced “ajar”) obtained her DVM in her native Turkey before getting a Master’s in avian sciences at UC Davis and a Ph.D. in poultry science at Auburn. Before joining the Department, she served as the Director of Penn State’s Women in the Sciences and Engineering Institute. “My goal is to assist students,” she says.

Dr. Howell earned a B.S. with honors in molecular biology at the University of Pittsburgh and a Ph.D. in molecular and cell biology at UC Berkeley, where he won the campus graduate teaching award. “I knew teaching was my calling,” he says. “The surprise for me was that advising students one on one is every bit as rewarding as being in the classroom.”

Penn State Pre-Vet Club hosts annual APVMA national symposium

By Christopher Lapsley

The Penn State Pre-Vet Club won the honor of hosting the 23rd Annual National Symposium of the American Pre-Veterinary Medicine Association (APVMA). On March 16–18, 2007, we hosted nearly 400 students from across the country—despite the ice storm that shut down air traffic across the eastern seaboard!—for a weekend of lectures and laboratories presented by distinguished veterinarians from across the nation.

The Club’s mission is to educate students about the variety of career opportunities in veterinary medicine. Club members learn about the vet school admissions process and gain an opportunity to connect with future colleagues.

Advised by Dr. Lester Griel and Dr. Robert Van Saun, the Club holds bi-weekly meetings hosting speakers from all disciplines in veterinary medicine. Club officers coordinate a wide variety of social events and fundraising activities.

Community volunteer work is always a major component of the Club’s activities, and in the past the Pre-Vetters have worked for local animal rescue facilities like the SPCA and T&D’s Cats of the World—Pennsylvania’s largest exotic and wild animal rescue facility.

We had an incredibly busy year of planning and preparation before we took the national spotlight. We feel that we hosted one of the most successful and enjoyable meetings the APVMA has enjoyed in years. Congratulations to everyone!

Chris Lapsley, now an Animal Bioscience graduate, was President of the Pre-Vet Club last year.

Students inaugurate new Biomedical Sciences Club at Penn State

By Matthew Gardner

The Biomedical Sciences Club is one of the newest student organizations on campus. With members representing half of Penn State’s colleges, what we share is an interest in careers in the biosciences—whether public or private research, industry, bioengineering, or human or veterinary medicine.

Starting with a handful of committed students, we accumulated a mailing list of almost 200 students in just one semester.

We meet at least twice a month and host a guest speaker. Our meetings range over topics like admission to professional schools, current research, and how to balance family with a career in science. We have also explored opportunities for enhancing a biological science degree, like study abroad, summer internships, undergraduate research, and so on. We also started a journal club.

Our first speakers were Dr. Adam Ruskin, a biotech consultant and Animal Bioscience alumnus, and former Veterinary and Biomedical Sciences faculty Dr. Andrew Henderson.

Dr. Ruskin told us about his path to a career in industry, and Dr. Henderson spoke about his research on HIV gene expression, and what he tells his kids (4 and 6) when they ask what he does at work.

We also organize special speaker events. Dr. Manuel Lináns from Princeton University’s new Lewis-Sigler Institute for Integrative Genomics traveled to Penn State to tell the Club about his cutting edge genomic and metabolomic studies of the malaria parasite.

We expect the Club to expand fast next year, with future events including volunteer work, social activities, and fundraisers. We would love to host more alumni speakers—please contact us via our website!

Matt Gardner is President of the Biomedical Sciences Club. He is a junior in Immunology and Infectious Disease.

www.clubs.psu.edu/up/bmsc/
Jessica Rivera: missing no opportunities at Penn State

Globetrotting future veterinarian Jessica Rivera graduated last spring with two majors and two minors: a BS in Animal Bioscience, a BA in International Studies, and minors in Japanese and Equine Science.

Born and raised in New Jersey by immigrant parents from El Salvador, Jess grew up bilingual in Spanish and English. At Penn State she added Japanese and American Sign Language.

The recipient of too many scholarships and awards to list, Jess says that our Animal Bioscience major’s strong reputation made Penn State an easy choice. She’s quick to add that the curriculum is tough, but serves up outstanding preparation for the infamously competitive admission to vet school.

A walking catalog of the “co-curricular enhancements” opportunities available to undergraduates in Veterinary and Biomedical Sciences, Jess spent not one but two semesters studying abroad.

First, at Kanda University near Tokyo, she studied Japanese and martial arts, and got the most of the time there by living in the home of a wonderful host family. She then spent the next semester in Adelaide, Australia, getting her genetics requirement and some general education courses under her belt. Her Japanese host family even made a trip to visit her in Australia.

After getting her veterinary degree, Jess plans to specialize in equine and swine emergency care and would like to add acupuncture treatment to her specialty. She just finished her first year of vet school at the University of Florida.

Animal Diagnostic Laboratory watches over livestock in Pennsylvania—and around the world

Penn State’s Animal Diagnostic Laboratory (ADL) protects public health by serving as a central facility for veterinarians, animal owners, and livestock and poultry producers in Pennsylvania and surrounding states.

By providing accurate, timely diagnostic and analytical services and monitoring for regulated diseases, the laboratory is at the front lines of disease detection and biosecurity.

Many ADL veterinarians are board-certified in specialties such as preventive medicine, microbiology, pathology, and avian medicine.

Several veterinarians teach graduate and undergraduate courses, advise graduate students, and supervise hands-on training programs for pre-veterinary students and internships for veterinary students.

The extension veterinarians provide field investigations for individual users and advice on preventative health programs for livestock and poultry producers.

The interactions between diagnosticians and field investigators provide unique opportunities for resolution of management and disease problems in the field.

The ADL, along with the PA Department of Agriculture and the University of Pennsylvania at New Bolton Center, comprise the Pennsylvania Animal Diagnostic Laboratory System (PADLS), which combines the expertise of both universities with the resources of the PA Bureau of Animal Health and Diagnostic Services. PADLS serves as one of the first lines of detection of foreign and emerging diseases and bioterrorism agents.

Veterinary Outreach redefines “Cooperative Extension”

Faculty and staff in the Department’s Outreach Divisions—Diagnostics, Extension and Field Investigation—are committed to the three main missions of Penn State: teaching, research, and extension (or “outreach”). Our major area of emphasis is outreach.

Veterinary outreach is frequently the face and voice of the Department to constituents across the Commonwealth, especially in the agricultural community. Issues concerning the impact of agriculture on the environment, the urban-rural interface, food safety, zoonotic diseases, and maintaining profitability make it increasingly challenging for Pennsylvanians producers to remain in animal agriculture. Faculty in Extension and Field Investigation coordinate cost effective and relevant on-farm problem solving with faculty from the Pennsylvania Animal Diagnostic Laboratory System (PADLS). Extension faculty also provide continuing education programs for veterinarians, ag professionals, and producers. All faculty members participate in applied research projects to improve animal health and welfare, increase productivity, or advance on-farm food safety initiatives.

Dr. Huaguang Lu (right) of the Animal Diagnostic Laboratory trains Cambodian laboratory technicians in the use of his rapid dot-ELISA test for avian flu virus at the diagnostic lab he helped to establish in Phnom Penh. Dr. Lu is a world authority on bird flu, and the ADL is on the frontline of Pennsylvania biosurveillance.

Dr. Ernest Hovingh (left), an expert on Johne’s disease, demonstrates calving to pre-vet students.
We want to hear from you!

Fill out this questionnaire online! vbs-alumni.psu.edu

Or, cut out this page, fill out the paper questionnaire, and mail it to us at:

VBS Alumni Program Group
115 Henning Building
University Park PA 16802

Your contact information

Mr.    Ms.
Mrs.    Dr.

First    Middle    Last

Address if not correct on mailing label

Your degree(s) from Penn State

Degree BS MS PhD    Program name    Year

Degree BS MS PhD    Program name    Year

Your career

Occupation    Employer    Title

Tell us your news!
Fill out this questionnaire online! vbs-alumni.psu.edu

What are you most interested in hearing about? . . . in Alumni News and on our website?

☐ Alumni profiles
☐ Student profiles
☐ Faculty profiles
☐ Staff profiles
☐ K-12 outreach
☐ Other ____________________________________________

☐ Updates on undergraduate programs
☐ Updates on graduate programs
☐ Faculty research
☐ Updates on Veterinary Outreach and Extension
☐ Department/industry collaborations

How would you like to get involved?

☐ I would like to come and speak to the Pre-Vet Club.
☐ I would like to come and speak to the Biomedical Sciences Club.
☐ I would like to be a mentor to current students.
☐ I would like to participate in K-12 outreach activities
☐ I would like to be involved in the new Veterinary and Biomedical Sciences Alumni Group!
☐ Other ____________________________________________

How would you prefer to receive Alumni News?

<table>
<thead>
<tr>
<th>Printed material/US Mail</th>
<th>not at all</th>
<th>somewhat</th>
<th>preferable</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Web page</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>RSS feed</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Tell us your news!

We will include your personal and professional updates on our website and in the next issue of Alumni News.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

We appreciate your input! For more information, please contact us at 814-865-7696 or vbs-alumni@psu.edu.
Veterinary and Biomedical Sciences offers an interdisciplinary Pathobiology graduate program that focuses on understanding the molecular mechanisms of disease. Research focuses on three areas:

Immunology, infectious disease, and hematopoiesis. Faculty in this area cover a range of important research areas, from the role of cell signaling in B and T lymphocytes to that of macrophages in cell-mediated immunity.

Toxicology and environmental carcinogenesis. Faculty in this area provide exciting opportunities to study the response of cells to toxic compounds and how antioxidants affect cellular metabolism.

Veterinary diagnostics and preventative medicine. The study of pathogenesis has brought together a diverse faculty with a wide range of techniques to bear on both human diseases and those that affect agricultural animals.

Faculty research is funded through external sources including but not limited to the National Institutes of Health and the U.S. and Pennsylvania Departments of Agriculture. The Center for Molecular Immunology and Infectious Disease, The Center for Molecular Toxicology and Carcinogenesis, and E. coli Reference Center are recently established to further strengthen the department’s research and educational offerings.

Within Penn State’s Department of Veterinary and Biomedical Science and the Huck Institutes of Life Sciences are core facilities that include DNA sequencing, oligonucleotide, flow cytometry and cell sorting, hybridoma and monoclonal antibody production, production of transgenic mice and the targeted mutation of genes using embryonic stem cell technology, electron microscopy, phospho-imager analysis, and the capability to study gene expression using microarrays.

Dr. Robert Paulson is the director of the program. For more information concerning the requirements for the MS and PhD degrees in Pathobiology, please visit www.vetsci.psu.edu/grad/

Reconnect! vbs-alumni.psu.edu

Alumni updates (continued from back cover)

2004 Pre-Vet Club officers set to finish vet school. Jay Hreiz (left, UPenn), named Outstanding Senior by the College alumni society in 2004, Lauren Choby (center, Auburn), and Stacy Ward (right, Virginia Tech) are all in their fourth year of veterinary school.

clubs, the Pre-Veterinary Club and the new Biomedical Sciences Club (see p. 3) and speak about their career paths, and participate in our year-round outreach activities (see p. 2).

If you would like to get involved, reconnect with the department at vbs-alumni.psu.edu.

Spotlight on Dr. Larry Gerson

A 1972 graduate of our “Animal Science” major (as it was called then) Dr. Gerson earned a VMD from Penn in 1975. The next year, he founded the Point Breeze Veterinary Clinic in Pittsburgh.

Dr. Gerson served as President of the University of Pennsylvania School of Veterinary Medicine Alumni Society (which gave him the Alumni Award of Merit in 2000), President of the Western Pennsylvania Veterinary Medical Association, Trustee for twelve years to the Pennsylvania Veterinary Medical Association (PVMA), and a member of the executive board of the PVMA. The PVMA named him Veterinarian of the Year (1985), and awarded him a Special Merit Award (1995) and a Distinguished Veterinary Service Award (2007).

Dr. Gerson and his daughter, Stephanie Berger (now in her third year of vet school at Ohio State) were both advised by our own Dr. Lester Griel, who remains active on the faculty.

Dan and his wife Katie (a PSU meteorology alum) extended the 2006 Bordetella conference in Paris into a European honeymoon.
Congratulations to our recent graduates—our newest alumni!

Lara Augulis TOX 2007 Melinda Ballantyne ANBIO 2008
Brendan Bergquist ANBIO 2007 Chris Bledzki TOX 2006
Mia Bleier ANBIO 2008 Amanda Botteicher TOX 2008 Danny Bruce ANBIO 2006
Jennifer Collins ANBIO 2008 Jesse Collins ANBIO 2007
Patrick Connolly ANBIO 2007 Jennifer Connor ANBIO 2006
Kelly Cunningham ANBIO 2007 Bridget Daly ANBIO 2006
Blair Dejong ANBIO 2008 Jolie Demehan ANBIO 2008
Allison Dotzel ANBIO 2007 Courtney Durso ANBIO 2006
Gretchen Ehrhart ANBIO 2007 Kyle Elkin TOX 2008
Alicia Fitzgerald ANBIO 2008 Alexandra Ford ANBIO 2007
Sarah Fritz ANBIO 2006 Claire Fuhrman ANBIO 2006 Diane Harris ANBIO 2008
Ashley-Rose Hart ANBIO 2006 Tasha Hendricks ANBIO 2007
Sarah Humnell ANBIO 2008 Chubu Inumah TOX 2008
Nathan Kapp ANBIO 2007 Renee Killins TOX 2007 Kristen Kolbas ANBIO 2008

Heather Lamp ANBIO 2007 Christopher Lapsey ANBIO 2007
Allison Leghart ANBIO 2008 Tracey Lettich ANBIO 2007
Alejandro Martinez ANBIO 2006 Michelle Mayer ANBIO 2007
Christina Menz ANBIO 2007 Jacqueline Misunas ANBIO 2007
Matthew Montressor ANBIO 2007 Scott Moseman ANBIO 2007
Ashley Prasse TOX 2007 Karl Raghina TOX 2006 Aaron Raski ANBIO 2007
Jessica Rivera ANBIO 2007 Corey Simmons TOX 2008 Brad Spicher TOX 2008
Katherine B. Smith ANBIO 2007 Tiffany Stankewicz ANBIO 2008
Megan Stein ANBIO 2007 Richard Tratthen ANBIO 2006
Erika Trottino ANBIO 2007 Jacob Trubic ANBIO 2007
Stephen Tucker ANBIO 2007 Rebecca Wagner ANBIO 2008
Chevy Welsh ANBIO 2007 Daniel Woodburn ANBIO 2008

Alumni updates
Reconnect with the new Veterinary and Biomedical Sciences Alumni Group at vbs-alumni.psu.edu!

This year the department will establish the College of Agricultural Sciences’ newest and most exciting alumni organization: the Veterinary and Biomedical Sciences Alumni Group.

Our goals are to reconnect with our valued alumni, help our alumni stay connected to one another, strengthen our information network, bring alumni into various departmental initiatives, and connect our current students with our alumni for everyone’s enrichment.

In particular, we would like to invite alumni to visit our undergraduate student programs.

continued on inside back cover

Save the date! Alumni Tailgate September 20!
Department of Veterinary and Biomedical Sciences

Alumni News
Reconnect with us at vbs-alumni.psu.edu!

Dr. Mark Yushack, an alumna now with Johnson & Johnson/McNeil, returned to Penn State in 2005 to talk with students about careers in Toxicology.